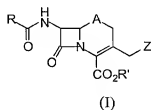


ABSTRACT

Provided are fluorescent substrates for β -lactamases having the general formula I:



in which R is a benzyl, 2-thienylmethyl, or cyanomethyl group; R' is selected from the group consisting of H, physiologically acceptable salts or metal, ester groups, ammonium cations, $-\text{CHR}_2\text{OCO}(\text{CH}_2)_n\text{CH}_3$, $-\text{CHR}_2\text{OCOC}(\text{CH}_3)_3$, acylthiomethyl, acyloxy-alpha-benzyl, deltabutyrolactonyl, methoxycarbonyloxymethyl, phenyl, methylsulphonylmethyl, β -morpholinoethyl, dialkylaminoethyl, and dialkylaminocarbonyloxymethyl, in which R₂ is selected from the group consisting of H and lower alkyl; A is selected from the group consisting of S, O, SO, SO₂ and CH₂; and Z is a donor fluorescent moiety. Also provided are methods of use of the compound of general formula I.